ABSTRACT

In one aspect, the present invention provides a genetically modified cell or non-human organism comprising such cells comprising modified genetic material which when expressed produces a polypeptide co-expressed with a reporter molecule and wherein the polypeptide is associated with terminal differentiation of a haematopoietic cell. Preferably, the genetic material gene is a *Blimp* allele or a part, fragment or functional form thereof. Furthermore, the identification of the reporter molecule in B-cell lineage cells indicates that such cells are committed to differentiate or have differentiated into ASC. Alternatively, reporter molecule activity in cells of a T cell lineage indicates that these cells are activated. Thus, as described herein, the presence of Blimp in a lymphocyte indicates that the cell is terminally differentiated or is committed to terminal differentiation. Exemplary T-cells include $CD4^+$ T-cells and $CD8^+$ T-cells and exemplary B-cells are ASC.